

METHOD OF COATING MICROELECTRONIC SUBSTRATES

Abstract

A method of coating a substrate comprises the steps of: (a) providing a substrate in an enclosed vessel, the substrate having a surface portion; (b) at least partially filling the enclosed vessel with a first supercritical fluid so that said first supercritical fluid contacts the surface portion, with the first supercritical fluid carrying or containing a coating component; then (c) adding a separate compressed gas atmosphere to the reaction vessel so that a boundary is formed between the first supercritical fluid and the separate compressed gas atmosphere, said separate compressed gas atmosphere having a density less than said first supercritical fluid; and then (d) displacing said first supercritical fluid from said vessel by continuing adding said separate compressed gas atmosphere to said vessel so that said boundary moves across said surface portion and a thin film of coating component is deposited on said microelectronic substrate.